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=> LUDOX(P)(TM or HS or SM or AM) or NALCOAG(P)(1060) or colloidal silica

          2050 LUDOX
         66624 TM
         10194 HS
         14488 SM
         71694 AM
           893 LUDOX(P)(TM OR HS OR SM OR AM)
           416 NALCOAG
          9155 1060/BI
           682 1,060/BI
          9787 1060
                 ((1060 OR 1,060)/BI)
            66 NALCOAG(P)(1060)
         41270 COLLOIDAL
        174821 SILICA
         11995 COLLOIDAL SILICA
                 (COLLOIDAL(W)SILICA)
L1       12194 LUDOX(P)(TM OR HS OR SM OR AM) OR NALCOAG(P)(1060) OR COLLO
IDA
               L SILICA

=> nitrate or sulfate or chloride or phosphate

         68823 NITRATE
        165109 SULFATE
        328723 CHLORIDE
        146850 PHOSPHATE
L2      419816 NITRATE OR SULFATE OR CHLORIDE OR PHOSPHATE

=> Example

SYSTEM LIMITS EXCEEDED - SEARCH ENDED

=> l1(P)l2

L3        2665 L1(P)L2

=> acrylic acid

        117379 ACRYLIC
        467480 ACID
L4       57974 ACRYLIC ACID
                 (ACRYLIC(W)ACID)

=> l1(P)(l2 or l4)

L5        2799 L1(P)(L2 OR L4)

=> (l3 or l5) and 524/700-790/cclst

          6112 524/700-790/CCLST  (96 TERMS)
                 (524/700+NEXT95/CCLST)
L6          35 (L3 OR L5) AND 524/700-790/CCLST

=> d l6 1-35 cit ab
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1. 5,948,525, Sep. 7, 1999, Biaxially stretched polyester film for forming container and method of producing the film; Masahiro Kimura, et al., 428/339, 35.7, 333, 338; **524/731**; 525/444; 528/275, 298, 302, 308, 308.6 [IMAGE AVAILABLE]

L6: 1 of 35

US PAT NO: 5,948,525 [IMAGE AVAILABLE]

ABSTRACT:

A biaxially stretched polyester film for forming a container, characterized by being formed of a polyester substantially consisting of an ethylene terephthalate unit and an ethylene naphthalate unit, the refractive index in the direction of thickness of the film being 1.5 or greater. This film is not only excellent in the formability during formation into cans or the like, but has excellent properties in taste property, particularly, the taste property after the retorting, and may be suitably used for containers produced by forming process and, particularly, for metallic cans.

2. 5,939,471, Aug. 17, 1999, Composite material and molded articles containing same; Hiroyuki Watanabe, et al., 523/334, 205, 216; 524/493, **789** [IMAGE AVAILABLE]

L6: 2 of 35

US PAT NO: 5,939,471 [IMAGE AVAILABLE]

ABSTRACT:

A composite material having a structure in which negatively charged colloidal silica having an average particle diameter of not greater than 50 nm and remaining substantially in the form of primary particles is attached to the outer surfaces of negatively charged polymer particles. By using this composite material, there can be obtained molded articles wherein colloidal silica is dispersed in a resin while remaining substantially in the form of primary particles.

3. 5,895,794, Apr. 20, 1999, Shelf stable cross-linked emulsions with optimum consistency and handling without the use of thickeners; Daniel Trent Berg, et al., 523/217, 200; 524/425, 432, 433, 435, 436, 437, 441, 445, 448, 449, 451, 457, **779**, **785**, **786**, **787**, **788**, **789**, 837, 858, 862, 863 [IMAGE AVAILABLE]

L6: 3 of 35

US PAT NO: 5,895,794 [IMAGE AVAILABLE]

ABSTRACT:

A crosslinked polysiloxane dispersion comprising a siloxane polymer, polymer mixture, or polymer/solvent mixture, capable of crosslinking via condensation, addition or free-radical reactions, and having a viscosity of greater than 5000 mPa.s but less than 500,000 mPa.s, if required, 0.1 to 10 weight parts of a crosslinking agent, and, if required, depending on the nature of the catalyst and silicon cure system, 0.000001 to 10 weight parts of a catalyst, 0.5 to 10 weight parts of a surfactant or surfactant mixture, and 0.5 to 25 weight parts water per 100 weight parts siloxane polymer. Optionally, adhesion promoters, pigments, reinforcing or non-reinforcing fillers, silicone resins, stabilizers, freeze/thaw additives, etc. may also be added to the dispersion.

4. 5,817,715, Oct. 6, 1998, Method for making curable coatings; George Frederic Medford, **524/789**, 558, **730**, **731** [IMAGE AVAILABLE]

L6: 4 of 35

US PAT NO: 5,817,715 [IMAGE AVAILABLE]

ABSTRACT:

A gel-free silica acrylate curable coating composition made from one or more of soluble salts, soaps, amines, nonionic and anion surfactants, acids or mixtures thereof, and a method for producing these compositions.

5. 5,721,309, Feb. 24, 1998, Aqueous coating for vinyl chloride polymer substrate; Satish C. Sharma, et al., 524/506; 428/447, 515, 518, 520, 522; 524/155, 162, 269, 509, 510, 588, **731**, 864 [IMAGE AVAILABLE]

L6: 5 of 35

US PAT NO: 5,721,309 [IMAGE AVAILABLE]

ABSTRACT:
A water based coating composition provides a stain resistant layer which adheres well to a substrate and is resistant to chemical attack by common household cleaning solvents such as isopropyl alcohol. The coating composition has a very low volatile organic compound content, thus providing an environmentally desirable alternative to organic solvent based coatings. The low volatile organic compound content of the composition substantially or completely eliminates the problems and expenses associated with solvent recovery for meeting chemical emission standards, and the potential for human exposure to solvent vapor is substantially eliminated or significantly reduced. The coating composition is aqueous based and incorporates a crosslinkable acrylic polymer latex, an amino resin crosslinking agent and a crosslinking catalyst. The polymer, crosslinking agent and catalyst are dispersed and/or solubilized in an aqueous medium. The coating composition is particularly well suited for application to flexible vinyl chloride polymer substrates to produce upon curing and drying a stain resistant, easily cleanable laminate. The stain resistant laminates can be advantageously used in the manufacture of wallcoverings, luggage exteriors, upholstery, vehicle interior and seat coverings, golf bags and other sporting goods, table cloths, and other similar applications.

6. 5,705,098, Jan. 6, 1998, Acicular electroconductive tin oxide fine particles and process for producing same; Haruo Okuda, et al., 106/1.25; 420/557; 423/92, 618; 524/457, **784** [IMAGE AVAILABLE]

L6: 6 of 35

US PAT NO: 5,705,098 [IMAGE AVAILABLE]

ABSTRACT:
The invention provides acicular electroconductive tin oxide fine particles which has a mean diameter of 0.005-1 .mu.m and a mean length of 0.05-10 .mu.m and an aspect ratio of 3 or higher. The invention further provides a process for producing the acicular electroconductive tin oxide fine particles, which comprises firing a starting material containing tin, silicon and an alkali metal halide at 700.degree.-1200.degree. C and removing soluble salts from the resulting fired product.

7. 5,674,937, Oct. 7, 1997, Elastomers from silicone emulsions having self-catalytic crosslinkers; Daniel Trent Berg, et al., 524/831, **731**, 837, 838, 847 [IMAGE AVAILABLE]

L6: 7 of 35

US PAT NO: 5,674,937 [IMAGE AVAILABLE]

ABSTRACT:
A crosslinked polysiloxane dispersion comprising a product of a siloxane polymer or polymer mixture having a viscosity of greater than 5000 mPa.s but less than 500,000 mPa.s, and at least one self catalyzing crosslinker, a surfactant, and water.

8. 5,629,367, May 13, 1997, Method of making pigment concentrate particles and product of same; Kevin D. Lofftus, et al., 524/88; 430/106, 110, 111, 137; 523/333, 339; 524/366, **758**; 528/494, 934 [IMAGE AVAILABLE]

L6: 8 of 35

US PAT NO: 5,629,367 [IMAGE AVAILABLE]

ABSTRACT:
A method of making pigment concentrate particles having pigment uniformly

dispersed in a polymer and exhibiting a controlled morphology and narrow particle size distribution. The method involves dispersing pigment particles in a pigment dispersant liquid to form a first dispersion phase; blending the first dispersion phase with a binder to produce a second dispersion phase; mixing the second dispersion phase under sufficient shear to produce a suspension of small dispersion phase droplets in an immiscible suspending liquid; allowing the small dispersion phase droplets in the suspension to coalesce to a larger size at which substantially no further coalescence can occur; mixing the suspension of coalesced droplets with an extracting liquid to remove the pigment dispersant liquid from the coalesced droplets; and isolating the resulting pigment concentrate particles.

9. 5,607,729, Mar. 4, 1997, Method for making curable coatings; George F. Medford, 427/495, 515, 518, 519, 520; 522/77, 83, 99; 524/301, 394, **777**; 528/14 [IMAGE AVAILABLE]

US PAT NO: 5,607,729 [IMAGE AVAILABLE] L6: 9 of 35

ABSTRACT:
A gel-free silica acrylate curable coating composition made from one or more of soluble salts, soaps, amines, nonionic and anion surfactants, acids or mixtures thereof, and a method for producing these compositions.

10. 5,594,061, Jan. 14, 1997, Aqueous coating for vinyl chloride polymer substrate; Satish C. Sharma, et al., 524/503, 155, 269, 506, 509, 510, 588, **731**, 864; 525/57, 58, 61, 162 [IMAGE AVAILABLE]

US PAT NO: 5,594,061 [IMAGE AVAILABLE] L6: 10 of 35

ABSTRACT:
A water based coating composition provides a stain resistant layer which adheres well to a substrate and is resistant to chemical attack by common household cleaning solvents such as isopropyl alcohol. The coating composition has a very low volatile organic compound content, thus providing an environmentally desirable alternative to organic solvent based coatings. The low volatile organic compound content of the composition substantially or completely eliminates the problems and expenses associated with solvent recovery for meeting chemical emission standards, and the potential for human exposure to solvent vapor is substantially eliminated or significantly reduced. The coating composition is aqueous based and incorporates a crosslinkable acrylic polymer latex, an amino resin crosslinking agent and a crosslinking catalyst. The polymer, crosslinking agent and catalyst are dispersed and/or solubilized in an aqueous medium. The coating composition is particularly well suited for application to flexible vinyl chloride polymer substrates to produce upon curing and drying a stain resistant, easily cleanable laminate. The stain resistant laminates can be advantageously used in the manufacture of wallcoverings, luggage exteriors, upholstery, vehicle interior and seat coverings, golf bags and other sporting goods, table cloths, and other similar applications.

11. 5,439,969, Aug. 8, 1995, Substrate-reactive coating composition; Mohan L. Sanduja, et al., 524/534, 398, 403, 413, 435, 457, 507, **720**; 525/123, 329.9 [IMAGE AVAILABLE]

US PAT NO: 5,439,969 [IMAGE AVAILABLE] L6: 11 of 35

ABSTRACT:
Crosslinkable aqueous-based coating compositions are described which are covalently bonded to a wooden surface to which they are applied. The compositions contain a crosslinkable polymer, a mono and/or polyethylenically unsaturated monomer which can be graft polymerized onto cellulose molecules present in said wooden surface, a water soluble peroxy free radical polymerization catalyst, a source of cations capable

of creating free radical sites in said cellulose molecules and, optionally, a crosslinking agent for said crosslinkable polymer. The coating may be air dried under ambient conditions to provide a crosslinked coating which is chemically bonded to the underlying wooden surface.

12. 5,089,295, Feb. 18, 1992, Suspension polymerization processes and toner compositions thereof; Daniel M. McNeil, 427/128, 222; 430/137; **524/785**; 526/91, 230.5, 340, 340.1 [IMAGE AVAILABLE]

US PAT NO: 5,089,295 [IMAGE AVAILABLE] L6: 12 of 35

ABSTRACT:
Processes for the preparation of polymers which comprises a suspension free radical polymerization of a monomer phase comprised of at least two monomers, and a polymerization initiator; and an aqueous phase comprised of water and magnetite.

13. 4,885,332, Dec. 5, 1989, Photocurable abrasion resistant coatings comprising silicon dioxide dispersions; Zayn Bilkadi, **524/714**; 252/182.17; **524/722**, 854; 525/223 [IMAGE AVAILABLE]

US PAT NO: 4,885,332 [IMAGE AVAILABLE] L6: 13 of 35

ABSTRACT:
A coating composition comprising a substantially water-free dispersion of colloidal silica, a polyacryloyl monomer, and a free radical initiator.

14. 4,874,805, Oct. 17, 1989, Novel oxazolidines; Rolf Mulhaupt, et al., 524/188, 262, 265, 266, 267, 268, **719**, **730** [IMAGE AVAILABLE]

US PAT NO: 4,874,805 [IMAGE AVAILABLE] L6: 14 of 35

ABSTRACT:
Compounds of the general formula I ##STR1## in which R.sup.1 is hydrogen, C.sub.1 -C.sub.12 -alkyl, C.sub.5 -C.sub.7 -cycloalkyl, phenyl or benzyl and R.sup.2 is hydrogen or C.sub.1 -C.sub.4 -alkyl, or R.sup.1 and R.sup.2, together with the C atom to which they are attached, form a 5-membered or 6-membered ring, and R.sup.3, R.sup.4, R.sup.5 and R.sup.6 are identical or different and are hydrogen, C.sub.1 -C.sub.12 -alkyl, phenyl which is unsubstituted or monosubstituted to trisubstituted by C.sub.1 -C.sub.4 -alkyl, halogen or C.sub.1 -C.sub.4 -alkoxy, or is a group of the formula --CH.sub.2 OR.sup.7 (II) in which R.sup.7 is C.sub.1- C.sub.12 -alkyl, phenyl which is unsubstituted or monosubstituted to trisubstituted by C.sub.1 -C.sub.4 -alkyl, halogen or C.sub.1 -C.sub.4 -alkoxy, or is --C(O)--R.sup.8, and R.sup.8 is C.sub.1 -C.sub.12 -alkyl, and also not more than two of the radicals R.sup.3, R.sup.4, R.sup.5 and R.sup.6 are one or two groups of the formula --CH.sub.2 CH.sub.2 Si(OR.sup.9).sub.3 (III), --CH.sub.2 OC(O)CH.sub.2 Si(OR.sup.9).sub.3 (IV), --Ch.sub.2 O(C.sub.m H.sub.2m)Si(OR.sup.9).sub.3 (V) or ##STR2## in which R.sup.9 is C.sub.1 -C.sub.4 -alkyl or phenyl and m is a number from 1 to 8 and r is a number 1 or 2 and t is 0, 1, or 2 and R.sup.1 is as defined above, and, in addition, compounds of the formula I in which R.sup.4 and R.sup.5 together from a group of the formula ##STR3## in which R.sup.9 is as defined above and R.sup.3 and R.sup.6 in this case are hydrogen and n is 1 or 2 and, if n is 1, Z is an organic radical which is derived from a primary amine ZNH.sub.2 and can contain one or two --Si(OR.sup.9).sub.3 groups and, if n is 2, Z is a divalent organic radical derived from a diprimary diamine H.sub.2 NZNH.sub.2 ; subject to the proviso that the compounds of the formula I contain one to three --Si(OR.sup.9).sub.3 groups, are suitable for use as adhesion promoters, particularly for moisture-curing epoxide and polyurethane resins.

15. 4,719,146, Jan. 12, 1988, Scratch resistant antireflective coatings

for synthetic resins; Heinz-Juergen Hohage, et al., 428/331, 213, 334, 412; 523/150; 524/493, **789**, 853 [IMAGE AVAILABLE]

L6: 15 of 35

US PAT NO: 4,719,146 [IMAGE AVAILABLE]

ABSTRACT:
Scratch resistant and antireflective coatings for synthetic resins, said coatings having a refractive index differing from the value 1.45 by at least 0.01 unit and a thickness ranging from 1 to 40 microns and comprising
(1) (a) an acrylate and/or methacrylate polymer, and/or
(b) an organosilicon polymer, or
(c) a melamine resin; and
(2) from 0.1 to 10 weight percent of amorphous, porous silicic acid having a large pore volume from 0.1 to 5 ml/g and consisting of primary particles of an average diameter ranging from 1 to 50 microns; synthetic resin substrates having such a coating thereon; coating compositions for applying such a coating to a substrate; and methods for making such coatings.

16. 4,661,556, Apr. 28, 1987, Method of producing reinforced aqueous emulsion of polydiorganosiloxane; David J. Huebner, et al., **524/745**, 837 [IMAGE AVAILABLE]

L6: 16 of 35

US PAT NO: 4,661,556 [IMAGE AVAILABLE]

ABSTRACT:
This invention is a method of producing a colloidal silica reinforced polydiorganosiloxane fluid in aqueous emulsion. The method combines an acidic aqueous colloidal silica sol and low molecular weight hydroxyl endblocked polydiorganosiloxane with anionic emulsifying agent, then homogenizes the mixture to form an emulsion. Because the water in the colloidal silica sol is used to supply water for the emulsion, it is possible to produce emulsions with solid content as high as 80 percent by weight. The emulsion is then mixed with surface active anionic catalyst and aged at room temperature to allow the polydiorganosiloxane to polymerize. Polymerization is halted by adding base to bring the pH to greater than 7. The reinforced polydiorganosiloxane emulsion can be further mixed with diorganotindicarboxylate and aged to give a curable emulsion which yields an elastomer upon removal of the water. A curable emulsion can also be produced by mixing the reinforced polydiorganosiloxane emulsion with diorganotindicarboxylate and alkylorthosilicate.

17. 4,618,645, Oct. 21, 1986, Method of producing aqueous latex of crosslinked polydiorganosiloxane; Therese M. Bauman, et al., **524/745**; 521/154; 524/837 [IMAGE AVAILABLE]

L6: 17 of 35

US PAT NO: 4,618,645 [IMAGE AVAILABLE]

ABSTRACT:
A method of producing an emulsion of crosslinked polydiorganosiloxane admixes hydroxyl endblocked polydiorganosiloxane, alkoxy silicone compound, anionic emulsifying agent, and water. The mixture is homogenized, then the emulsion is admixed with surface active anionic catalyst. Maintaining the catalyzed emulsion, having a pH of less than 5, at room temperature allows the ingredients to react to raise the molecular weight of the polydiorganosiloxane and to crosslink the polymer. The reaction is halted by adding sufficient base to raise the pH to greater than 7. The resultant latex yields an elastomer upon removal of the water. When colloidal silica is also added to the mixture before homogenization, the final latex yields a reinforced elastomer upon removal of the water.

18. 4,584,341, Apr. 22, 1986, Emulsions of crosslinked

polydiorganosiloxanes; David J. Huebner, et al., 524/837; 523/312, 334; 524/156, 158, 501, 588, **745, 747**, 807; 525/100, 102, 106 [IMAGE AVAILABLE]

L6: 18 of 35

US PAT NO: 4,584,341 [IMAGE AVAILABLE]

ABSTRACT:
This invention is a method of producing a latex of crosslinked polydiorganosiloxane. The latex yields an elastomer upon removal of the water. The latex is prepared by homogenizing a mixture of hydroxyl endblocked polydiorganosiloxane, less than 75 millimoles of surface active anionic catalyst per kilogram of polydiorganosiloxane where said surface active anionic catalyst is dodecylbenzene sulfonic acid or hydrogen lauryl **sulfate**, and water to yield an oil-in-water emulsion. This emulsion is then admixed with from 0.5 to 15 parts by weight of an alkoxy silicon compound selected from a silane of the formula R.sub.a 'Si(OR.sup.3).sub.4-a where R' is a monovalent hydrocarbon radical of up to 12 carbon atoms, R.sup.3 is an alkyl radical of 1 to 6 carbon atoms, and a is 0 or 1, a partial hydrolyzate of the silane, or mixtures of silane and partial hydrolyzate. The resulting emulsion is maintained at a temperature of about 15.degree. to 30.degree. C. for at least 5 hours at a pH of less than 5 until a crosslinked polymer is formed, then the emulsion is admixed with sufficient base to raise the pH to greater than 7. The crosslinked polymer present in the latex is reinforced by adding greater than 1 part by weight of **colloidal silica** sol or silsesquioxane to the latex. Removal of water from the latex results in a reinforced elastomer. This method yields a latex which can be applied and dried immediately after preparation to yield an elastomer.

19. 4,567,231, Jan. 28, 1986, Emulsions of reinforced polydiorganosiloxane latex; David J. Huebner, et al., 524/837; 523/312, 334; 524/156, 158, 501, 588, **745, 747**, 801; 525/100, 102, 106 [IMAGE AVAILABLE]

L6: 19 of 35

US PAT NO: 4,567,231 [IMAGE AVAILABLE]

ABSTRACT:
This invention is a method of producing a latex of crosslinked polydiorganosiloxane reinforced with colloidal silica. The method allows the production of a latex having a relatively high amount of silica present in relation to the polymer because the water used to form the emulsion can be that present in the acidic colloidal silica sol used in the method. The high solids latex can be useful as a caulking material. The method homogenizes a hydroxyl endblocked polydiorganosiloxane, a silane of the formula R'.sub.a Si(OR.sup.3).sub.4-a where R' is a monovalent hydrocarbon radical of up to 12 carbon atoms, R.sup.3 is an alkyl radical of 1 to 6 carbon atoms, a partial hydrolyzate, or mixture of silane and hydrolyzate, and a is 0 or 1; a surface active anionic catalyst of the formulae R.sup.2 C.sub.6 H.sub.4 SO.sub.3 H wherein R.sup.2 is a monovalent hydrocarbon radical of at least 6 carbon atoms, R.sup.2 OSO.sub.2 OH, or ##STR1## wherein R.sup.4 is H or R.sup.2 ; and greater than 1 part by weight of colloidal silica present as an acidic sol in water. This homogenized mixture is an oil-in-water emulsion. This emulsion is maintained at a temperature of 15.degree. to 30.degree. C. for at least 5 hours at a pH of less than 5 until a crosslinked polymer is formed. The product is a latex which produces an elastomer upon removal of the water at room temperature. Shelf stable products are produced by adjusting the pH to from 7 to 12.5..

20. 4,513,114, Apr. 23, 1985, Polyester composition; Katsuo Kunugi, et al., **524/706, 707, 708, 709, 710, 711, 712, 713**; 528/275, 286, 287 [IMAGE AVAILABLE]

L6: 20 of 35

US PAT NO: 4,513,114 [IMAGE AVAILABLE]

ABSTRACT:
A polyester composition with an excellent high-speed melt-spinning property, comprising
(A) 100 parts by weight of a matrix polyester resin comprising at least 80 molar % of an ethylene terephthalate recurring unit, and
(B) 0.2 to 7 parts by weight of a dispersoid dispersed in the matrix, the dispersoid being such that, when it is contained in a predetermined amount (w) in a typical matrix polyester resin consisting of a polyethylene terephthalate having an intrinsic viscosity of 0.640, the resultant exemplary polyester composition satisfies the relationship (I): ##EQU1## wherein: .gamma..sub.1 =shearing rate of 0.01 sec.sup.-1 ; .gamma..sub.2 =shearing rate of 5.0 sec.sup.-1 ; .eta..gamma..sub.1 (w)=melt viscosity (poise=1/10 N.multidot.sec.multidot.m.sup.-2) of the exemplary polyester composition at .gamma..sub.1 ; .eta..gamma..sub.1 (0)=melt viscosity of matrix polyester resin at .gamma..sub.1 ; .eta..gamma..sub.2 (w)=melt viscosity of the exemplary polyester composition at .gamma..sub.2 ; and .eta..gamma..sub.2 (0)=melt viscosity of the matrix polyester resin at .gamma..sub.2.

21. 4,508,569, Apr. 2, 1985, Sealing compound for cans; Hideo Kumasaka, et al., 106/14.12, 14.21; 220/614, 619; 524/414, 417, **710**, **724** [IMAGE AVAILABLE]

L6: 21 of 35

US PAT NO: 4,508,569 [IMAGE AVAILABLE]

ABSTRACT:
Disclosed is a sealing compound for cans, which is applied to the periphery of a can end member to seal the double-seamed portion between the can end member and a can body, said sealing compound comprising as a base component an aqueous latex of a styrene-butadiene rubber containing as a particle size-adjusting agent an alkali metal carbonate or an alkali metal salt of a phosphorus oxyacid in an amount of 0.3 to 2.0 parts by weight per 100 parts by weight of solids of the styrene-butadiene rubber.

22. 4,486,504, Dec. 4, 1984, Solventless, ultraviolet radiation-curable silicone coating compositions; Rack H. Chung, 428/412, 418, 447; 522/14, 15, 25, 77, 79, 83, 84, 99, 100, 907; **524/728**, 800, 806; 526/279; 528/10, 25, 32 [IMAGE AVAILABLE]

L6: 22 of 35

US PAT NO: 4,486,504 [IMAGE AVAILABLE]

ABSTRACT:
An ultraviolet radiation-curable silicone coating composition is disclosed which, when applied to a solid substrate, provides an abrasion-resistant coating firmly adhered thereon. The silicone coating composition is free of residual solvent and free of toxic hydroxy acrylates, and is prepared from the hydrolysis products of acryloxy-functional silanes and/or glycidoxy-functional silanes, colloidal silica and a photoinitiator.

23. 4,442,239, Apr. 10, 1984, Phosphate derivatives, process for producing phosphate derivatives and fillers for human hard tissues containing the same; Masayoshi Tsunekawa, et al., 523/116; **524/730**, **789**; 526/277; 558/162; 987/224, 228 [IMAGE AVAILABLE]

L6: 23 of 35

US PAT NO: 4,442,239 [IMAGE AVAILABLE]

ABSTRACT:
Phosphate derivatives represented by the formula ##STR1## wherein R represents a group containing at least one reactive double bond and A represents a group which may optionally contain reactive double bonds are disclosed. The phosphate derivatives of the present invention have at least two reactive double bonds, and polymers prepared from these phosphate derivatives in the presence or absence of other polymerizable monomers are useful as fillers for human hard tissues such as bones and

teeth.

24. 4,435,219, Mar. 6, 1984, Stable inorganic coating composition for adherent, inorganic coatings; Paul P. Greigger, 106/287.16, 287.12; 428/429, 447; 524/417, **711**; 528/12, 20, 23 [IMAGE AVAILABLE]

US PAT NO: 4,435,219 [IMAGE AVAILABLE] L6: 24 of 35

ABSTRACT:
Disclosed are coating compositions containing a vehicle comprising a dispersion of **colloidal silica**, a hydrolyzable alkoxysilane, an alcohol, water, and an acidifying agent selected from a soluble metal acid **phosphate**, phosphoric acid, and a mixture thereof.

25. 4,194,920, Mar. 25, 1980, Intrachromoleucospheruloid pigment compositions and processes for producing same; Oliver W. Burke, Jr., deceased, et al., 523/200, 213, 216, 220, 333, 342; **524/783**, **786**, **789**, **790**, 791, 843 [IMAGE AVAILABLE]

US PAT NO: 4,194,920 [IMAGE AVAILABLE] L6: 25 of 35

ABSTRACT:
An intrachromoleucospheruloid pigment composition and a process for producing the same; the intrachromoleucospheruloid pigment composition consisting essentially of spheruloids of essentially transparent organic polymer material, preferably cross-linked to essential insolubility in any physical solvent, having primary particles of an average size not exceeding 4 microns in diameter which have embedded therein particulate pigment composition consisting essentially of (a) organic color pigment material having primary particles of an average particle size not exceeding 0.2 micron and preferably below 0.02 micron in diameter in combination with (b) inorganic leuco pigment material consisting essentially of inorganic white and/or transparent white pigment material having a different refractive index from that of element (a) and primary particles not exceeding 0.2 micron and preferably between 0.2 and 0.1 micron in diameter. In the process for its production (a) the organic color pigment material is reduced to an average particle size of 0.2 micron or less, (b) the inorganic leuco pigment material is reduced to an average particle size of 0.2 micron or less, (c) the combined organic and inorganic leuco pigment materials (a) and (b) are then included in an emulsion polymerization of monomer material preferably comprising an effective quantity of cross-linking agent, and the polymerization is conducted to produce emulsion polymer of an average particle size not exceeding 4 microns in diameter, having embedded therein the still smaller organic color and inorganic leuco pigment particles. In the procedure it is preferable, although not essential, that the organic color pigment material and inorganic leuco pigment material be co-ground for at least a portion of the step during which the particle size reduction is effected so that the harder inorganic pigment being reduced to the prescribed size may aid in reducing the organic color pigment to a still smaller size.
Cooperative features are also disclosed.

26. 4,169,737, Oct. 2, 1979, Intrachromospheruloid/intraleuco-spheruloid pigment compositions and processes for producing same; Oliver W. Burke, Jr., deceased, et al., 523/216, 200, 201, 208, 212; 524/385, 389, 501, **710**, **714**, **715**, **719**, **720**, **722**, **724**, **730**, **745**, **750**, **770**, **780**, **783**, **786**, 791, 808, 811, 812, 816, 818, 827, 834, 835, 836 [IMAGE AVAILABLE]

US PAT NO: 4,169,737 [IMAGE AVAILABLE] L6: 26 of 35

ABSTRACT:
An intrachromospheruloid/intraleucospheruloid pigment composition and a process for producing the same: the intrachromospheruloid/intraleucospher

uloid pigment composition consisting essentially of (a) spheruloids of essentially transparent organic polymer material, preferably cross-linked to essential insolubility in any physical solvent, having primary particles of an average size not exceeding 4 microns in diameter which have imbedded therein particulate organic color pigment composition consisting essentially of organic color pigment material having primary particles of an average size not exceeding 0.2 micron in diameter and (b) spheruloids of essentially transparent organic polymer material preferably cross-linked to essential insolubility in any physical solvent, having primary particles of an average size not exceeding 4 microns in diameter which have imbedded therein particulate leuco pigment composition consisting essentially of inorganic white and/or transparent white pigment material having a different refractive index and primary particles not exceeding 0.2 micron in diameter.
In the process, (a) the organic color pigment material is reduced to an average particle size of 0.2 micron or less, and is then included in an emulsion polymerization of ethylenically unsaturated monomer material preferably comprising an effective quantity of cross-linking agent, and the polymerization is conducted to produce emulsion polymer of an average particle size not exceeding 4 microns in diameter, having imbedded therein the still smaller organic color pigment particles; (b) the intraleucospheroloid is prepared in a similar manner and (c) the products of (a) and (b) are combined and bonded together ionically and/or by a bonding agent to produce the intrachromospheruloid/intraleucospheruloid pigment composition.
Procedures for imparting special properties to the products of (a), (b) and (c) are also disclosed.
Cooperation features are also disclosed.

27. 4,132,564, Jan. 2, 1979, Intraleucospheruloid pigments and processes for producing same; Oliver W. Burke, Jr., deceased, et al., 523/200; 106/400, 401, 402; 523/201, 208, 212, 216; **524/779**, **780**, **783**, **785**, **786**, **787**, **788**, **789**, 791, 805, 808, 811, 812, 813, 816, 818, 827, 834, 835, 836 [IMAGE AVAILABLE]

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US PAT NO: 4,132,564 [IMAGE AVAILABLE]

ABSTRACT:
An intraleucospheruloid pigment and a process for producing the same; the intraleucospheruloid pigment consisting essentially of (a) spheruloids of essentially transparent organic polymer material, preferably cross-linked to essential insolubility in any physical solvent, having primary particles of an average size not exceeding 4 microns in diameter which have embedded therein particulate leuco pigment composition consisting essentially of inorganic opaque white and/or transparent white pigment material having a different refractive index from that of the organic polymer and primary particles of an average size not exceeding 0.2 micron in diameter. In the process for its production, the inorganic pigment material is reduced to an average particle size of 0.2 micron or less, and preferably to between 0.2 to 0.1 micron, and is then included in an emulsion polymerization of monomer material preferably comprising an effective quantity of cross-linking agent, and the polymerization is conducted to produce emulsion polymer of an average particle size not exceeding 4 microns in diameter, having embedded therein the still smaller inorganic pigment particles. Cooperative features are also disclosed.

28. 4,085,236, Apr. 18, 1978, Process for producing electrostatic recording material; Yoshiyuki Ishibashi, et al., 427/121; 162/138; 427/219, 220, 221, 222, 385.5; 523/210, 214, 412, 504, 513; **524/77**, 272, 397, 400, 401, 423, 424, 427, 430, 433, 437, 442, 446, 506, 510, 512, 518, 522, 552, 554, 556, 560, 562 [IMAGE AVAILABLE]

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US PAT NO: 4,085,236 [IMAGE AVAILABLE]

ABSTRACT:
A process for producing an electrostatic recording material which comprises kneading a hydrophobic pigment having a critical surface tension of 50 dynes/cm or less with an aqueous dispersion of a copolymer consisting of (I) 10 to 50% by weight of methacrylic acid, (II) 5 to 50% by weight of a alkenyl aromatic compound and (III) 30 to 85 % by weight of at least one member selected from the group consisting of conjugated diolefins, alkyl acrylates and alkyl methacrylates; having a glass transition temperature (Tg) of 40.degree. C or less; and having an intrinsic viscosity [.eta.] of 0.1 to 1.0 dl/g as measured in tetrahydrofuran at 25.degree. C, in a weight ratio of the copolymer to the pigment of 100/20 to 100/200, in the presence of an alkaline material in such a proportion that the viscosity of the aqueous dispersion of the copolymer becomes at least 350 cps, adjusting the viscosity of the aqueous dispersion containing the copolymer and the hydrophobic pigment to 10 to 5,000 cps, coating the resulting coating composition on the surface of an electroconductive base sheet and drying the same. Said process can produce, with a high production efficiency, an electrostatic recording material having a substantially glossless appearance like ordinary paper of office use, being excellent in writability with a pencil and an aqueous ink, stampability and printability, and being capable of recording clear copy images thereon.

29. 4,058,501, Nov. 15, 1977, Polymer compositions; Arnold L. Anderson, 524/373, **758** [IMAGE AVAILABLE]

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US PAT NO: 4,058,501 [IMAGE AVAILABLE]

ABSTRACT:
Polymer compositions containing a three component system consisting of (1) an elastomer, (2) certain bis-phenoxy compounds having the formula: ##STR1## WHEREIN Z is bromine, m and m' are each integers having a value of 1-5 with the proviso that the total bromine atom content is from 6-10, and "T" is a straight or branched chain carbon group having 1-4 carbon atoms, and (3) an enhancing agent hereinafter defined.

30. 4,045,406, Aug. 30, 1977, Plastic compositions; Arnold L. Anderson, 524/373, 411, **755** [IMAGE AVAILABLE]

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US PAT NO: 4,045,406 [IMAGE AVAILABLE]

ABSTRACT:
Plastic compositions containing nylons and bis-phenoxy compounds having the formula: ##STR1## WHEREIN Z is bromine, m and m' are each integers having a value of 1-5 and alkylene is a straight or branched chain alkylene group having 1 to 6 carbon atoms.

31. 4,038,248, Jul. 26, 1977, Plastic compositions; Arnold L. Anderson, 524/373, 411, **755** [IMAGE AVAILABLE]

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US PAT NO: 4,038,248 [IMAGE AVAILABLE]

ABSTRACT:
Plastic compositions containing polyolefins and bis-phenoxy compounds having the formula: ##STR1## WHEREIN Z is bromine, m and m' are each integers having a value of 1-5 and alkylene is a straight or branched chain alkylene group having 1 to 6 carbon atoms.

32. 4,028,336, Jun. 7, 1977, Plastic compositions; Arnold L. Anderson, 524/373, **758** [IMAGE AVAILABLE]

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US PAT NO: 4,028,336 [IMAGE AVAILABLE]

ABSTRACT:
Plastic compositions containing polyurethanes and bis-phenoxy compounds

having the formula: ##STR1## WHEREIN Z is bromine, m and m' are each integers having a value of 1-5 and alkylene is a straight or branched chain alkylene group having 1 to 6 carbon atoms.

33. 3,887,940, Jun. 3, 1975, Liquid fabric wall cover; Donald J. Mangold, et al., 523/220; 427/280; 524/9, 10, 12, 18, 21, 35, 45, 55, **789** [IMAGE AVAILABLE]

US PAT NO: 3,887,940 [IMAGE AVAILABLE] L6: 33 of 35

ABSTRACT:
Decorative fabric-like surface coating is applied by hand-operated paint roller. Composition applied is a viscous mache including a fibrous textile mass, water activatable thickening agent, latex adhesive, and water in relative amounts which provide a viscosity suitable for roller application. A water softener or a wetting agent may be included to assure proper viscosity.

34. 3,855,172, Dec. 17, 1974, UNIFORM OXIDE MICROSPHERES AND A PROCESS FOR THEIR MANUFACTURE; Ralph K. Iler, et al., 523/223; **524/780**, **784**, **785**, **786**, **789**, 876 [IMAGE AVAILABLE]

US PAT NO: 3,855,172 [IMAGE AVAILABLE] L6: 34 of 35

ABSTRACT:
Oxide microspheres having a diameter in the 0.5 to 20 micron range are produced by forming a mixture of urea or melamine and formaldehyde in an aqueous sol containing colloidal oxide particles. Copolymerization of the organic constituents produces coacervation of the organic material into microparticles containing the inorganic material. The organic constituent can be burned out to form a powder of uniform-sized porous microparticles consisting of an interconnected array of inorganic colloidal particles separated by uniform-sized pores.

35. 3,616,196, Oct. 26, 1971, SHEETS AND LAMINATES OF RESINOUS AND FIBROUS MATERIALS; George C. Sun, et al., 428/114, 435; 442/63, 267; **524/706**, **708**, **777**, **780**, **786** [IMAGE AVAILABLE]

US PAT NO: 3,616,196 [IMAGE AVAILABLE] L6: 35 of 35

ABSTRACT:
(A) Sheets of fibrous material impregnated with a polymeric precursor of a polyimide resin, that may be partially cured if desired, wherein such polymeric precursor has inert, thermally stable, colloidal particles dispersed therein and (B) unitary polyimide laminates prepared from a plurality of such sheets.